

## WHAT IS CLAIMED IS:

1. An electret condenser microphone comprising:
  - a condenser section that comprises an electret film and two opposedly
  - 5 disposed electrodes with the electret film provided and positioned therebetween; and
  - a capsule accommodating said condenser section therein;
- characterized in that:
  - one of said two electrodes comprises an electrically conductive
  - 10 diaphragm;
  - the other of said two electrodes comprises an electrically conductive back electrode board located in parallel opposition to and spaced by an electrically insulating, annular disc-like interelectrode spacer from said diaphragm with a gap therebetween having a predetermined depth defined
  - 15 by said spacer;
  - said electret film is formed on either one of the surface of said back electrode board on the diaphragm side and the surface of said diaphragm on the back electrode board side;
  - a cover board is affixed to said back electrode board in a manner such
  - 20 that it covers the surface of said back electrode board opposite from the diaphragm side;
  - said back electrode board has an air vent aperture formed therethrough;
  - said cover board has a receiving sound aperture formed therethrough which is positioned so as not to be in alignment with the air vent aperture of
  - 25 said back electrode board;
  - the opening of said air vent aperture in said back electrode board at the cover board side is covered by said cover board;

the opening of said receiving sound aperture in said cover board at the back electrode board side is covered by said back electrode board; and

said back electrode board and said cover board have a connecting slit at an interface portion therebetween extending perpendicularly to the axes of  
5 said apertures of the back electrode board and of the cover board and connected to the apertures of said two boards;

whereby said electret film is communicated with the outside air through said connecting slit and said apertures of said two boards connected by the slit, so that the ingress of grit from the outside air to reach to said electret  
10 film is suppressed by said connecting slit.

2. The microphone as set forth in claim 1 wherein:

said cover board is affixed in intimate contact to said back electrode board, and

15 said connecting slit is formed in at least one of the intimately affixed surfaces of the two boards.

3. The microphone as set forth in claim 2 wherein:

said connecting slit is formed as a V-shaped groove or channel in the  
20 surface of either one of the back electrode board and the cover board in which it is formed to a depth of up to 50  $\mu\text{m}$  so as to serve as an acoustic resistance slit.

4. The microphone as set forth in claim 2 wherein:

25 said capsule is in the form of an electrically conductive cylindrical cup having a front board serving as said cover board;

said front board is provided with an air vent aperture acting as the

receiving sound aperture, said back electrode board being affixed in intimate contact to the inside surface of said front board;

said electret film is disposed on the surface of said back electrode board opposite from the front board side;

5 the opening of said air vent aperture in said back electrode board at the front board side is covered by said front board;

the opening of said receiving sound aperture in said front board at the back electrode board side is covered by said back electrode board; and

said connecting slit is formed in the surface of said front board on the  
10 back electrode board side.

5. The microphone as set forth in claim 2 wherein:

said capsule is in the form of an electrically conductive cylindrical cup having a front board serving as said cover board;

15 said front board is provided with an air vent aperture acting as the receiving sound aperture, said back electrode board being affixed in intimate contact to the inside surface of said front board;

said electret film is disposed on the surface of said back electrode board opposite from the front board side;

20 the opening of said air vent aperture in said back electrode board at the front board side is covered by said front board;

the opening of said receiving sound aperture in said front board at the back electrode board side is covered by the back electrode board; and

said connecting slit is formed in the surface of said back electrode board  
25 on the front board side.

6. The microphone as set forth in claim 2 wherein:

said capsule is in the form of an electrically conductive cylindrical cup having a front board serving as said cover board;

said front board is provided with an air vent aperture acting as the receiving sound aperture, said back electrode board being affixed in intimate  
5 contact to the inside surface of said front board;

said electret film is disposed on the surface of said diaphragm on the back electrode board side;

the opening of said air vent aperture in said back electrode board at the front board side is covered by said front board;

10 the opening of said receiving sound aperture in said front board at the back electrode board side is covered by said back electrode board; and

said connecting slit is formed in the surface of said front board on the back electrode board side.

15 7. The microphone as set forth in claim 2 wherein:

said capsule is in the form of an electrically conductive cylindrical cup having a front board serving as said cover board;

said front board is provided with an air vent aperture acting as the receiving sound aperture, said back electrode board being affixed in intimate  
20 contact to the inside surface of said front board;

said electret film is disposed on the surface of said diaphragm on the back electrode board side;

the opening of said air vent aperture in said back electrode board at the front board side is covered by said front board;

25 the opening of said receiving sound aperture in said front board at the back electrode board side is covered by the back electrode board; and

said connecting slit is formed in the surface of said back electrode board

on the front board side.

8. The microphone as set forth in claim 1 wherein:

5 said cover board is affixed to said back electrode board with an annular disc-like, back electrode board spacer interposed therebetween; and  
a gap defined between said back electrode board and said cover board and having a gap depth determined by said back electrode board spacer is adapted to act as said connecting slit.

10 9. The microphone as set forth in claim 8 wherein:

said capsule is in the form of an electrically conductive cylindrical cup having a front board serving as said cover board;

said front board is provided with a through aperture acting as the receiving sound aperture, said back electrode board being affixed to the  
15 inside surface of said front board with an annular disc-like, back electrode board spacer interposed therebetween;

said electret film is disposed on the surface of said back electrode board opposite from said front board side; and

a gap formed between said back electrode board and said cover board  
20 and having a predetermined gap depth defined by said back electrode board spacer is adapted to act as said connecting slit.

10. The microphone as set forth in claim 8 wherein:

said capsule is in the form of an electrically conductive cylindrical cup  
25 having a front board serving as said cover board;

said front board is provided with a through aperture acting as the receiving sound aperture, said back electrode board being affixed to the

inside surface of said front board with an annular disc-like, back electrode board spacer interposed therebetween;

said electret film is disposed on the surface of said diaphragm opposite from the back electrode board side; and

- 5 a gap formed between said front board and said back electrode board and having a predetermined gap depth defined by said back electrode board spacer is adapted to act as said connecting slit.